

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
4 August 2005 (04.08.2005)

PCT

(10) International Publication Number  
**WO 2005/070122 A2**

- (51) International Patent Classification: Not classified
- (21) International Application Number:  
PCT/US2005/000722
- (22) International Filing Date: 10 January 2005 (10.01.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
60/535,327 9 January 2004 (09.01.2004) US
- (71) Applicant (for all designated States except US): **BOARDS OF REGENTS, THE UNIVERSITY OF TEXAS SYSTEM** [US/US]; 201 West 7th Street, Austin, TX 78701 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **HAMILL, Owen, P.** [US/US]; 1212 Winnie Street, Galveston, TX 77550 (US). **MAROTO, Rosario** [ES/US]; 1212 Winnie Street, Galveston, TX 77550 (US).
- (74) Agent: **PROVENCE, David, L.**; Muecting, Raasch & Gebhardt, P.A., P.O. Box 581415, Minneapolis, MN 55458-1415 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**  
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MECHANOSENSITIVE ION CHANNELS AND METHODS OF USE

(57) Abstract: The present invention provides methods for identifying agents that decrease the activity of a mechanosensitive ion channels, preferably, a mechanosensitive Ca<sup>2+</sup>-permeable channel (MscCa) channel. The present invention also provides methods for using agents that decrease the activity of mechanosensitive ion channels, including, for instance, methods for treating cancer, methods for decreasing metastasis of a cancer cell, and methods for decreasing a symptom associated with cancer.

WO 2005/070122 A2

**BEST AVAILABLE COPY**